

CLAIMS:

1. A process for preparing a lubricating oil basestock having a VI of at least about 135 which comprises:

(1) hydrotreating a lubricating oil feedstock having a wax content of at least about 60 wt.%, based on feedstock, with a hydrotreating catalyst under effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650°F (343°C) minus products to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(2) stripping the hydrotreated feedstock to separate gaseous from liquid product; and

(3) hydrodewaxing the liquid product with a dewaxing catalyst which is at least one of ZSM-48, ZSM-57, ZSM-23, ZSM-22, ZSM-35, ferrierite, ECR-42, ITQ-13, MCM-71, MCM-68, beta, fluorided alumina, silica-alumina or fluorided silica alumina under catalytically effective hydrodewaxing conditions wherein the dewaxing catalyst contains at least one Group 9 or Group 10 noble metal.

2. The process of claim 1 wherein the hydrotreating catalyst contains at least one Group 6, Group 9 or Group 10 metal.

3. The process of claim 1 wherein the hydrotreating conditions include a temperature of from 150-400°C, a pressure of from 1480-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 89-1780 m³/m³.

4. The process of claim 1 wherein the dewaxing catalyst is at least one of ZSM-22, ZSM-23, ZSM-48 or ZSM-57.

5. The process of claim 4 wherein the dewaxing catalyst is ZSM-48.

6. The process of claim 1 wherein the dewaxing catalyst contains Pt, Pd or mixtures thereof.

7. The process of claim 1 wherein hydrodewaxing conditions include a temperature of from 250-400°C, a pressure of from 791-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 45-1780 m³/m³.

8. The process of claim 1 wherein the dewaxing catalyst is sulfided, reduced, or sulfided and reduced.

9. The process of claim 1 wherein hydrodewaxed liquid product from step (3) is hydrofinished under effective hydrofinishing conditions.

10. The process of claim 9 wherein the hydrofinishing includes a hydrofinishing catalyst containing at least one Group 6, Group 9 or Group 10 metal.

11. The process of claim 9 wherein the hydrofinishing includes a hydrofinishing catalyst which is a mesoporous catalyst from the M41S family.

12. The process of claim 11 wherein the hydrofinishing catalyst contains at least one noble metal.

13. A process for preparing a lubricating oil basestock having a VI of at least about 125 which comprises:

(1) hydrotreating a lubricating oil feedstock having a wax content of at least about 50 wt.%, based on feedstock, with a hydrotreating catalyst under

effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650°F (343°C) minus products to produce a hydrotreated feedstock to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(2) stripping the hydrotreated feedstock to separate gaseous from liquid product;

(3) hydrodewaxing the liquid product with a dewaxing catalyst which is at least one of ZSM-22, ZSM-23, ZSM-35, ferrierite, ZSM-48, ZSM-57, ECR-42, ITQ-13, MCM-68, MCM-71, beta, fluorided alumina, silica-alumina or fluorided silica-alumina under catalytically effective hydrodewaxing conditions wherein the dewaxing catalyst contains at least one Group 9 or 10 noble metal; and

(4) hydrofinishing the product from step (3) with a mesoporous hydrofinishing catalyst from the M41S family under hydrofinishing conditions.

14. The process of claim 13 wherein the hydrotreating conditions include a temperature of from 150-400°C, a pressure of from 1480-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 89-1780 m³/m³.

15. The process of claim 13 wherein the dewaxing catalyst is at least one of ZSM-22, ZSM-23, ZSM-48 or ZSM-57.

16. The process of claim 15 wherein the dewaxing catalyst is ZSM-48.

17. The process of claim 13 wherein the dewaxing catalyst contains Pt, Pd or mixtures thereof.

18. The process of claim 13 wherein hydrodewaxing conditions include a temperature of from 250-400°C, a pressure of from 91-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 45-1780 m³/m³.

19. The process of claim 13 wherein the M41S family includes MCM-41, MCM-48 and MCM-50.

20. The process of claim 19 wherein the M41S family is MCM-41.

21. The process of claim 13 wherein hydrofinishing conditions include a temperature of from 150-350°C, a pressure of from 2889-20786 kPa, a liquid hourly space velocity from 0.1-5 hr⁻¹ and a hydrogen treat rate of 45-1780 m³/m³.

22. The process of claim 13 wherein the dewaxing catalyst is sulfided, reduced, or sulfided and reduced.

23. The process of claim 13 wherein the hydrotreating catalyst contains at least one Group 6, Group 9 or Group 10 metal.

24. The process of claim 13 wherein the hydrofinishing catalyst contains at least one noble metal.

25. The process of claim 24 wherein the noble metal is at least one of Pt or Pd.

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26. A process for preparing a lubricating oil basestock having a VI of at least about 135 which comprises:

(1) hydrotreating a lubricating oil feedstock having a wax content of at least about 60 wt.%, based on feedstock, with a hydrotreating catalyst under effective hydrotreating conditions such that less than 5 wt.% of the feedstock is converted to 650°F (343°C) minus products to produce a hydrotreated feedstock to produce a hydrotreated feedstock whose VI increase is less than 4 greater than the VI of the feedstock;

(2) stripping the hydrotreated feedstock to separate gaseous from liquid product;

(3) hydrodewaxing the liquid product with a dewaxing catalyst which is ZSM-48 under catalytically effective hydrodewaxing conditions wherein the dewaxing catalyst contains at least one Group 9 or 10 noble metal; and

(4) hydrofinishing the product from step (3) with MCM-41 under hydrofinishing conditions.

27. The process of claim 26 wherein the hydrotreating conditions include a temperature of from 150-400°C, a pressure of from 1480-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 89-1780 m³/m³.

28. The process of claim 26 wherein the dewaxing catalyst contains Pt, Pd or mixtures thereof.

29. The process of claim 26 wherein the dewaxing catalyst is sulfided, reduced, or sulfided and reduced.

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30. The process of claim 26 wherein hydrodewaxing conditions include a temperature of from 250-400°C, a pressure of from 791-20786 kPa, a liquid hourly space velocity from 0.1-10 hr⁻¹ and a hydrogen treat rate of 45-1780 m³/m³.

31. The process of claim 26 wherein hydrofinishing conditions include a temperature of from 150-350°C, a pressure of from 2889-20786 kPa, a liquid hourly space velocity from 0.1-5 hr⁻¹ and a hydrogen treat rate of 45-1780 m³/m³.

32. The process of claim 26 wherein the feedstock wax content is at least about 75 wt.%.

33. The process of claim 26 wherein MCM-41 contains at least one of Pt or Pd.